

# Anti-IRS1 Antibody

## ER2001-35



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Rat
<b>Applications:</b>	WB, IHC-P, IF-Cell, FC
<b>Molecular Wt:</b>	132 kDa

**Description:** Insulin receptor substrate 1 plays a key role in transmitting signals from the insulin and insulin-like growth factor-1 (IGF-1) receptors to intracellular pathways PI3K / Akt and Erk MAP kinase pathways. Tyrosine phosphorylation of IRS-1 by insulin receptor (IR) introduces multiple binding sites for proteins bearing SH2 homology domain, such as PI3K, Grb-2/Sos complex and SHP2. PI3K, involved in interaction with IRS-1, produces PIP3, which, in turn, recruits Akt kinase. Further, Akt kinase is activated via phosphorylation of its T308 residue and analogous sites in PKC by PDK1. This phosphorylation is absent in tissues lacking IRS-1. The cascade is followed by glucose uptake. Formation of the Grb-2/Sos complex, also known as the RAS guanine nucleotide exchange factor complex, results in ERK1/2 activation. IRS-1 signal transduction may be inhibited by SHP2 in some tissues.

**Immunogen:** Recombinant protein within human IRS1 aa 1-300.

**Positive control:** Rat brain tissue lysates, A549, MCF-7, human colon tissue, human kidney tissue.

**Subcellular location:** Cytosol, Nucleus.

**Database links:** SwissProt: P35568 Human | P35570 Rat

### Recommended Dilutions:

<b>WB</b>	1:500-1:1,000
<b>IHC-P</b>	1:50-1:100
<b>IF-Cell</b>	1:50-1:200
<b>FC</b>	1:50-1:100

**Storage Buffer:** 1\*TBS (pH7.4), 1% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

**Purity:** Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

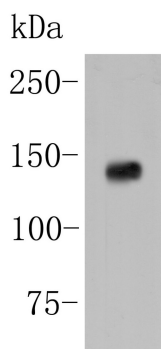
Orders:0086-571-88062880

Technical:0086-571-89986345

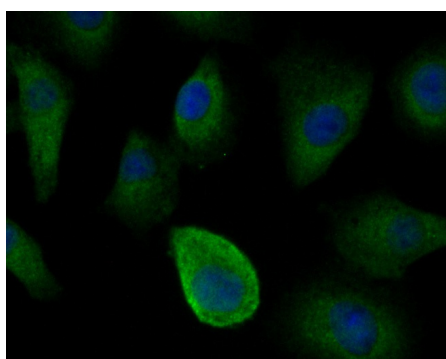
Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn

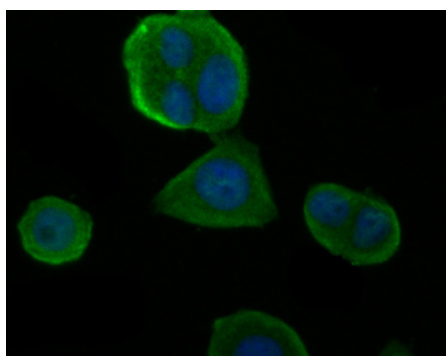
## Images



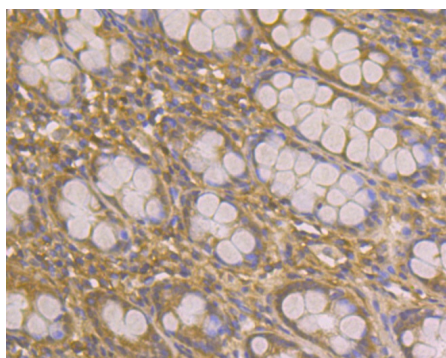
**Fig1:** Western blot analysis of IRS1 on rat brain tissue lysate. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ER2001-35, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.



**Fig2:** ICC staining of IRS1 in A549 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER2001-35, 1/100) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).



**Fig3:** ICC staining of IRS1 in MCF-7 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER2001-35, 1/100) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).



**Fig4:** Immunohistochemical analysis of paraffin-embedded human colon tissue using anti-IRS1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ER2001-35, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

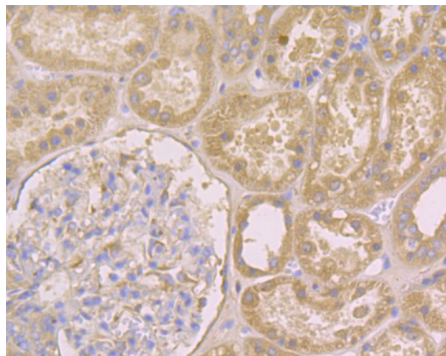
Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

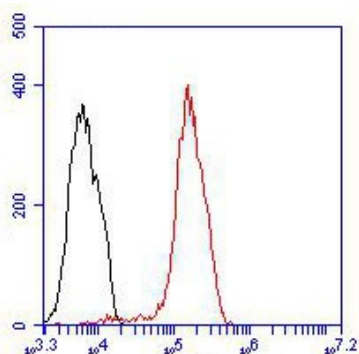
Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn



**Fig5:** Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-IRS1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH<sub>2</sub>O and PBS, and then probed with the primary antibody (ER2001-35, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



**Fig6:** Flow cytometric analysis of IRS1 was done on MCF-7 cells. The cells were fixed, permeabilized and stained with the primary antibody (ER2001-35, 1/100) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated goat anti-rabbit IgG Secondary antibody at 1/500 dilution for 30 minutes. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

### Background References

1. Kuo A.H.et.al.Recruitment of insulin receptor substrate-1 and activation of NF-kappaB essential for midkine growth signaling through anaplastic lymphoma kinase.Oncogene 26:859-869(2007).

Hangzhou Huan Biotechnology Co.,Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn